

Customer No.: 38834
Attorney Docket No.: 001036
Serial No.: 09/642,886
Art Unit: 2653

REMARKS

Reconsideration of this application is respectfully requested. Claims 1-9 are pending in this application. Claim 1 stands rejected. Claims 2-5 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten to include the features of the base claim and any intervening claims. Claims 6-9 were previously withdrawn from consideration as being directed to a non-elected invention.

Claim 1 has been amended to correct minor informalities. The specification has also been amended to correct a minor informality. No new matter has been added. Approval and entry of the changes to the specification and claims are respectfully requested.

Claim Rejections – 35 U.S.C. 102(e)

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by **Awano et al.** (U.S. Patent No. 5,388,954). For the reasons set forth in detail below, this rejection is respectfully traversed.

Awano et al. discloses a magneto-optical recording medium 10 capable of generating a clock that is precisely synchronized with a recording domain recorded on an information recording layer. The magneto-optical recording medium 10 includes an information recording layer 5 on which information is recorded and a reproducing layer 3 onto which information recorded on the information recording layer 5 is transferred (see Fig. 4 and column 2, lines 62-67)

As shown in Fig. 1, clock marks 8 and magnetic microdomains 9 (information recording marks) are formed in the information recording layer 5 of the magneto-optical recording medium 10. A reproducing clock is generated in accordance with the clock marks 8 (see, column 3, lines

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1-8 and column 7, lines 36-53). Moreover, a clock pit is formed on the magneto-optical recording medium 10 for generating tracking error and clock signals (see column 9, lines 23-25). The reproducing clock is generated in synchronization with the recording marks 9 so that it is suitable as a clock for generating pulse-modulated reproducing light.

Fig. 5 of **Awano et al.** illustrates an apparatus used for recording and reproducing. The recording/reproducing apparatus includes a first sensor for detecting the clock marks 8 and a second sensor for detecting the clock pit (see, e.g., column 5, line 58 and column 6, lines 18-19).

In operation, an adder 301 receives outputs from sensors 28, 281 and outputs a signal representing reflected light from the clock pit. A subtracter 302 receives outputs from sensors 28, 281 and outputs a signal representing reflected light from the clock marks 8. A phase-locked-loop (PLL) circuit 39, including a phase comparator 61 and a delay circuit 62 (see Fig. 6), receives the outputs from the adder 301 and subtracter 302 and compares the phases of the received signals. If there is a difference in phase, the phase difference is corrected by the delay circuit 62. Accordingly, the PLL 39 outputs a reproducing clock corresponding to the signals from the clock marks 8 as detected by the subtracter 302. During recording, the PLL 39 outputs a recording clock corresponding to the signal from the clock pit as detected by the adder 301. See column 9, lines 22-35.

It is respectfully submitted that **Awano et al.** do not disclose or suggest a sensor having first and second regions arranged along a track of an optical disk and detecting light reflected from the optical disk in each region, as recited in claim 1. The apparatus for recording and reproducing 101 shown in Fig. 5 includes sensors 28, 281. If sensors 28, 281 are to correspond to the sensor recited in claim 1, it is necessary that sensors 28 and 281 are arranged along a track of

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magneto-optical recording medium 10. **Awano et al**, however, fail to disclose that sensors 28 and 281 are arranged along the track of magneto-optical recording medium 10.

Furthermore, the present invention is directed to an optical disk apparatus capable of preventing erroneous detection of a fine clock mark. For example, in accordance with the present invention, an adder in conjunction with a defect remover detect a defect, such as a scratch, on a magneto-optical disk and set a fine clock mark signal level to zero in order to eliminate noise generated due to the defect. See, e.g., page 9, lines 6 – 9 and page 10, line 31 – page 11, line 2 of the present application.

It is respectfully submitted that **Awano et al**. do not disclose or suggest *an adder adding the output signal from a first region of a sensor to an output signal from a second region of the sensor to generate a sum signal, and a defect remover setting a level of a fine clock signal to zero when a level of the sum signal is lower than a predetermined level*, as recited in claim 1.

In contrast to the claimed invention, the adder 301 disclosed by **Awano et al**. generates a signal representing reflected light from a clock pit, and the respective phases of the signal generated by the adder 301 and a signal representing reflected light from clock marks 8 are compared by phase comparator 61 to adjust any phase difference. Thus, **Awano et al**. uses the signal from adder 301 to *adjust a phase difference* and not to adjust a level of a fine clock signal to zero when a level of sum signal is lower than a predetermined level, as claimed.

In review of the above remarks, it is respectfully submitted that claim 1 patentably distinguishes over the **Awano et al**. reference. Reconsideration and withdrawal of the rejection of claim 1 under 35 USC 102(e) are respectfully requested.

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CONCLUSION

If the Examiner believes that there are any remaining issues to be addressed, the Examiner is requested to contact Applicant's undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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